1

If x is 50% larger than z, and y is 20% larger than z, then x is what percent larger than y?

A) 15%
B) 20%
C) (25%)
D) 30%

$x = 1.50(z)$

$y = 1.20(z)$

$\dfrac{x}{y} = \dfrac{1.50z}{1.20z}$

$= 1.25$

2

Veronica has a bank account that earns $m\%$ interest compounded annually. If she opened the account with \$200, the expression \$200x^t represents the amount in the account after t years. Which of the following gives x in terms of m?

A) $1 + .01m$

B) $1 + m$

C) $1 - m$

D) $1 + 100m$

$$\frac{m}{100}$$

$$A = P(1+r)^t$$

r: rate
t: time

$$A = 200\left(1 + \frac{m}{100}\right)^t$$

3

In a survey of 400 seniors, x percent said that they plan on majoring in physics. One university has used this data to estimate the number of physics majors it expects for its entering class of 3,300 students. If the university expects 66 physics majors, what is the value of x?

$$\frac{66}{3300} = \frac{x}{100}$$

$$3300x = 6600$$

$$x = \frac{6600}{3300}$$

$$x = 2$$

Questions 4-7 refer to the following information.

The table below shows the number of box spring and mattress units sold over four weeks at a bedding store.

Week	1	2	3	4	Total
Box Springs	38	42	53	34	167
Mattresses	47	61	68	43	219
Total	85	103	121	77	386

4

Which week accounted for approximately 32% of all the box spring units sold?

A) Week 1
B) Week 2
C) Week 3
D) Week 4

$$(.32)(167) = 53$$

5

Approximately what percentage of all units sold came from week 2?
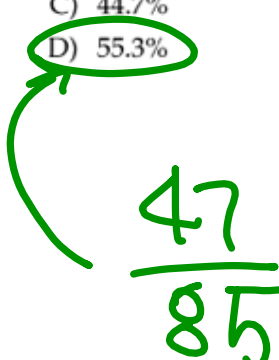
A) 15.8%

B) 26.7%

C) 31.3%

D) 47.0%

$$\frac{103}{386} = .267$$

6

Mattresses accounted for approximately what percentage of all units sold during week 1?

A) 22.0%

B) 32.5%

C) 44.7%

D) 55.3%

$$\frac{47}{85}$$